

This Page Is Inserted by IFW Operations  
and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning documents *will not* correct images,  
please do not report the images to the  
Image Problem Mailbox.**

Claims

1. A pilot valve for use in a water supply system including

biassing means to control a gate for controlling water flow through a control chamber;

a second chamber sealed by a second chamber diaphragm into which control pressure is applicable for also controlling the operation of the gate, whereby, in use, an increase in control pressure acts to reduce water flow through the gate;

wherein the side of the diaphragm against which the control pressure is not applied, is in fluid communication with the control chamber.

2. A pilot valve according to claim 1 wherein the biassing means is biased to open the gate.

3. A pilot valve according to claim 2 wherein the biassing means is rigidly connected to the gate by a mechanical linkage.

4. A pilot valve according to claim 3 wherein the diaphragm is rigidly connected to the gate by a mechanical linkage.

5. A pilot valve according to claim 3 or claim 4

13

means via a mechanical linkage.

6. ~~A pilot valve according to any one of the preceding claims wherein the biasing means is a spring means.~~

7. A pilot valve according to claim 6 wherein the spring means is a helical spring.

8. A pilot valve according to any one of the preceding  
10 claims further including a control chamber diaphragm.

9. A pilot valve according to claim 8 wherein said biasing means is located on the opposite side of the control chamber diaphragm to the control chamber.

10. A pilot valve according to any one of claims 8 or 9 wherein the ratio of the area of the control chamber diagram to the second chamber diaphragm is 2:1 or less.

add art